Please amend the claims to read as indicated in the following list of claims:

1. (Previously presented) A reconfigurable laser transmitter comprising:

an integration platform having a silicon substrate;

a gain element, having an optical output, the gain element having a body of material different than said integration platform, being disposed on said integration platform;

a first optical path receiving optical output from said gain element, said first optical path comprising a silica waveguide within said integration platform;

a tunable microresonator optically coupled with said first optical path, said tunable microresonator having a body of material different than said silica waveguide and being disposed on said integration platform;

a second optical path coupled with said tunable microresonator, said second optical path comprising a silica waveguide within said integration platform; and

a fixed grating in said integration platform and coupled with said second optical path.

2. Cancelled.

3. (Previously presented) The reconfigurable laser transmitter of claim 1 wherein said tunable microresonator comprises a microdisk or a Fabry-Perot etalon.

4. (Previously presented) The reconfigurable laser transmitter of claim 3 wherein said microdisk is heterogeneously attached to said integration platform.

5. (Original) The reconfigurable laser transmitter of claim 1 wherein said fixed grating is fabricated in a material having a temperature sensitivity less than or equal to 0.1 Å/°C.

6. (Original) The reconfigurable laser transmitter of claim 1 wherein said tunable microresonator is electrically tuned.

7. (Original) The reconfigurable laser transmitter of claim 1 wherein said tunable microresonator is vernier tuned.

8. (Original) The reconfigurable laser transmitter of claim 1 wherein said fixed grating is a sampled grating.

9. (Original) The reconfigurable laser transmitter of claim 1 wherein the gain element is a laser and wherein the fixed grating is a sample grating having Bragg reflection peaks for locking the laser thereto.

10. (Previously presented) A method for reconfiguring a wavelength of a laser comprising the steps of:

providing an integration platform formed of silicon;

coupling a tunable microresonator having a passband to a fixed grating having a plurality of reflection peaks via a silica waveguide in said integration platform, said silica waveguide including a UV-induced sampled grating;

heterogeneously mounting the tunable microresonator on said integration platform, said tunable microresonator being formed of a material different than the silica waveguide; and

tuning said tunable microresonator such that the passband of said tunable microresonator is aligned with one of said plurality of reflection peaks of said fixed grating.

11. (Original) The method of claim 10 wherein said tunable microresonator is a microdisk or a Fabry-Perot etalon.

12. Cancelled.

13. (Original) The method of claim 10 where said step of tuning is done electrically.

14. (Original) The method of claim 10 wherein said fixed grating is fabricated in a material having a temperature sensitivity less than or equal to 0.1 Å/°C.

15. (Original) The method of claim 10 wherein said fixed grating is a sampled grating.

16. (Original) The method of claim 10 wherein said step of tuning is vernier tuning.

17. (Previously presented) A method of configuring a transmitter to transmit one of a plurality of wavelengths, said method comprising the steps of:

passing a spectrum of light from a gain element into a tunable Fabry-Perot etalon or microdisk microresonator;

selecting a first portion of said spectrum of light to be transmitted by said transmitter; and

electrically tuning said tunable Fabry-Perot etalon or microdisk microresonator, wherein a second portion of said spectrum of light is transmitted to a sampled grating fabricated in a silica waveguide for reflection back to said gain element.

18. Cancelled.

19. (Original) The method of claim 17 wherein said step of electrically tuning further comprises the step of vernier tuning.

20. (Previously presented) The method of claim 17 wherein the step of selecting a first portion further comprises the step of coupling a fixed optical grating to said tunable Fabry-Perot etalon or microdisk microresonator.

21. (Previously presented) The method of claim 20 wherein said fixed optical grating is a UV-induced sampled grating.

22. (Previously presented) The method of claim 17 wherein the step of selecting a first portion further comprises the step of coupling a fixed optical-resonator filter to said tunable Fabry-Perot etalon or microdisk microresonator.

23. (Original) The method of claim 17 wherein said spectrum of light corresponds to predetermined frequencies set according to an international standard.

24. (Previously presented) The reconfigurable laser transmitter of claim 1 wherein the gain element is a GaInAsP/InP semiconductor optical amplifier.

25. (Previously presented) The reconfigurable laser transmitter of claim 24 wherein the microresonator is has a body comprising GaInAsP/InP semiconductor materials.

26. (Previously presented) The method of claim 17 further including:

forming at least another silica waveguide in a silicon integration platform, and

forming the tunable Fabry-Perot etalon or microdisk microresonator from III-V semiconductor material on or in said silicon integration platform so that the Fabry-Perot etalon or microdisk microresonator is optically coupled with said at least two silica waveguides.

27. (Previously presented) The method of claim 17 wherein the gain element is a GaInAsP/InP semiconductor optical amplifier.

28. (Previously presented) The method of claim 27 wherein the Fabry-Perot etalon or microdisk microresonator has a body comprising GaInAsP/InP semiconductor materials.

29. (Previously presented) A method of configuring a transmitter to transmit one of a plurality of wavelengths, said method comprising the steps of:

passing a spectrum of light from a group III-V gain element into a tunable group III-V Fabry-Perot etalon;

selecting a first portion of said spectrum of light to be transmitted by said transmitter; and

electrically tuning said tunable Fabry-Perot etalon, wherein a second portion of said spectrum of light is transmitted to a sampled grating fabricated in a silica waveguide for reflection back to said gain element.

30. (Previously presented) The method of claim 29 wherein the gain element has a body comprising GaInAsp/InP semiconductor materials and the Fabry-Perot etalon also has a body comprising GaInAsp/InP semiconductor materials.

31. (Previously Presented) The reconfigurable laser transmitter of claim 1 wherein the gain element provides an optical signal at its optical output, wherein the fixed grating generates a sequence of Bragg reflectivity peaks in the optical signal and wherein a passband of the tunable microresonator selects one of the peaks in said sequence of Bragg reflectivity peaks.

32. (Previously Presented) The reconfigurable laser transmitter of claim 1 wherein the gain element is a semiconductor optical amplifier.

33. (Previously Presented) A method of configuring a transmitter to transmit one of a plurality of wavelengths, said method comprising the steps of:

passing a spectrum of light from a gain element into a tunable Fabry-Perot etalon;

selecting a first portion of said spectrum of light to be transmitted by said transmitter; and

electrically tuning said tunable Fabry-Perot etalon, wherein a second portion of said spectrum of light is transmitted to a sampled grating fabricated in a silica waveguide for reflection back to said gain element.

34. (Previously Presented) The method of claim 33 wherein said sampled grating has a sequence of Bragg reflectivity peaks and wherein a passband of the tunable Fabry-Perot etalon selects one of the peaks in said sequence of Bragg reflectivity peaks.

35. (Previously Presented) The method of claim 33 wherein the gain element is a semiconductor optical amplifier.

36. (Previously Presented) The method of claim 29 wherein said sampled grating has a sequence of Bragg reflectivity peaks and wherein a passband of the tunable Fabry-Perot etalon selects one of the peaks in said sequence of Bragg reflectivity peaks.

37. (Previously Presented) The method of claim 29 wherein the gain element is a semiconductor optical amplifier.

38. (Previously Presented) The method of claim 17 wherein said sampled grating has a sequence of Bragg reflectivity peaks and wherein a passband of the tunable Fabry-Perot etalon selects one of the peaks in said sequence of Bragg reflectivity peaks.

39. (Previously Presented) The method of claim 17 wherein the gain element is a semiconductor optical amplifier.

40. (New) The method of claim 17 wherein the step of electrically tuning said tunable Fabry-Perot etalon or microdisk microresonator causes the transmitter, by vernier tuning, to tune over a number of Bragg reflection peaks generated by the sampled grating.

41. (New) The method of claim 40 wherein the electrically tuning step comprises moving, by injection of current, successive passbands of the tunable Fabry-Perot etalon or microdisk microresonator, so that they coincide, one at a time, with the Bragg reflection peaks generated by the sampled grating.